

REMARKS

Favorable reconsideration of this application in light of the following amendments and remarks is respectfully requested.

As previously presented, the instant invention provides a system in which tags are identified in an efficient manner. A single transmission of an interrogation signal can be used to identify a tag within range. This interrogation signal has a number of portions corresponding to the number of bits (or bit sequences) of the identification word for each tag.

All tags are interrogated bit by bit using a single interrogation signal. As the interrogation signal progresses, tags become deactivated in response to the individual signal portions, but there is no need to repeat any previous portion of the signal. This system allows tags to be identified one by one at a rate of one tag per interrogation signal.

Claim 18 has been amended by this response. This amendment is to direct claim 18 more clearly to the invention of claims 1 and 10, and the amendment to claim 18 therefore raises no new issues. Entry of this response is therefore respectfully requested.

Rejections under 35 USC 102(b)

Claims 18-20 and 22 stand rejected under 35 USC 102 (b) as anticipated by Dodd et al. (US 5 339 073, "Dodd").

Claim 18 has been amended to clarify further the operation outlined above. In particular, claim 18 has been amended to require the communication signal to "comprise a plurality of portions, each portion being associated with a predetermined bit of the identification word". The claim has also been amended to make clear that the communication signal is sent portion by portion, and that deactivation of tags is in response to an individual signal portion.

Claim 18 is therefore more clearly directed to the interrogation bit by bit of the identification words of the tags in range, and to the deactivation in response to individual signal portions. This enables the system to identify an individual tag in range with one interrogation signal. The identified tag can then be made to switch to idle, so that the other tags can be identified.

As previously argued, Dodd does not use a communications signal which interrogates each word bit by bit using a single signal having only a number of portions corresponding to the number of bits (or bit sequences). In Dodd, a large number of different interrogation signals are required before a single tag can be identified. In the examples of Figure 4 to 6, 16 interrogation signals are needed, each one progressively longer than the last, and each one requiring its own synchronising interrogation signal (column 5 lines 29,42).

Claim 18 is therefore directed more clearly to the efficient interrogation system of the invention, and which allows a single transmission of an interrogation signal to be used to identify a tag within range.

Since Dodd does not teach every element of claim 18, claim 18 is not anticipated under 35 U.S.C. §102(b). Dependent claims 19, 20, and 22 depend from independent claim 18 and are allowable for the same reasons as discussed above with regard to claim 18.

Claim rejections under 35 USC 103(a)

Independent claims 1 and 10 stand rejected under 35 USC 103 (a) as unpatentable over Denne et al. (US 4 691 202, "Denne") in view of Dodd.

As previously presented, Denne discloses a system in which a general interrogation signal is sent out, and a tag in range replies by sending its identity to the

transceiver. The system operates by repeatedly sending messages until only one tag replies.

The system of Denne does not interrogate identification words bit by bit. Tags are not deactivated based on analysis of a signal portion representing an individual bit (or bit sequence) of the identification word. The Examiner has recognised that Denne fails to disclose that "each portion of the interrogation signal determined by the transponder is dependent on the response of the tag". However, Denne also fails to disclose that a tag is "deactivated when not having said given value of the identification word at the predetermined bit or bit sequence".

Claims 1 and 10 already clearly require the deactivation of tags based on an individual signal portion. This means that as the communications signal progresses, tags drop out in dependence on the signal portions, and only one tag remains active, and is therefore identified, at the end of a single communications signal.

As the Examiner has argued, Dodd does disclose interrogation using a bit by bit approach. The Examiner argues that Dodd teaches deactivating each tag when not having the given value of the identification word, and cites col. 5 lines 20-26 in this respect.

In Dodd, there is no deactivation of tags bit by bit. Instead, a progressively longer interrogation word is sent out. As previously presented, an interrogation signal can take the form "For those tags with first two bits = 10, what is your third bit?". A large number of progressively more complicated interrogation signals are required before a single tag can be identified. This type of interrogation signal does not require any deactivation of tags, and there is in fact no disclosure of this in Dodd.

In the instant invention, the corresponding interrogation signal for the scenario above is simply "Is your third bit 0?". This is possible because all tags which do not have the first two identification bits as 10 have been deactivated.

It is therefore believed that claims 1 and 10 are already clearly distinguished over Denne and Dodd, and are clearly directed to a system in which there is bit-by-bit interrogation and deactivation of tags, and in which a single interrogation signal enables identification of a tag. The deactivation means there is no need to resend information concerning the previous values of the identification word, as in Dodd.

The invention as now claimed provides clear efficiency improvements over Denne and Dodd, either alone or in combination. There is no disclosure or suggestion in Denne or Dodd of bit-by-bit interrogation and tag deactivation.

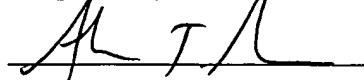
The above arguments are limited to the independent claims, and detailed arguments are not presented in respect of the dependent claims. However, the arguments of the Examiner should not be taken to be accepted.

In view of the arguments and amendments above, we submit that this application is in order for allowance. Such action is therefore solicited. If any extension is required, applicant hereby petitions for same and requests that any extension or other fee required may be charged to deposit account number 19-4972.

If the Examiner has any questions as to the allowability of the currently pending claims or if there are any defects which need to be corrected, the Examiner is invited to speak to the Applicant's counsel at the telephone number given below.

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Respectfully submitted,



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